Description

The 12KP series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Features

- Halogen free and RoHS compliant
- Glass passivated junction
- Low incremental surge resistance
- Excellent clamping capability
- 12000W peak pulse power capability at 10/1000μs waveform, repetition rate (duty cycle): 0.05%
- Fast response time
- High Temperature soldering guaranteed: 265℃/10 seconds/.375″, (9.5mm) lead length, 5lbs (2.3kg) tension
- Plastic package has underwriters laboratory flammability 94V-0
- Meet MSL level1, per J-STD-020
- IEC-61000-4-2 ESD 30kV(Air), 30kV (Contact)
- Unit Weight: 2.1g

Applications

TVS components are ideal for the protection of I/O Interfaces, VCC bus and other vulnerable circuits used in telecom, computer, Industrial and consumer electronic applications.

Maximum Ratings and Characteristics (T_A=25℃)

Rating	Symbol	Value
Peak pulse power dissipation at 10/1000μs waveform (Note1, Fig.1)	P_{PPM}	12000W
Peak pulse current of at 10/1000μs waveform (Note 1)	I_{PPM}	See Table(A)
Steady state power dissipation at T_L=75℃ (Fig.4)	$P_{M(AV)}$	8.0W
Operating junction and Storage Temperature Ranges	T_J,T_{STG}	-55℃ to +150℃
Typical thermal resistance junction to lead	$R_{\theta JL}$	8℃/W
Typical thermal resistance junction to ambient	$R_{\theta JA}$	40℃/W

Notes:1. Non-repetitive current pulse, per Fig.3 and derating above T_A=25℃ per Fig.2.

Electrical Characteristics (T_A=25℃)

Part Number	Reverse Stand-Off Voltage	Breakdown Voltage @I_T		Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_R
	V_R(V)	$V_{B\ Min.}$(V)	$V_{B\ Max.}$(V)	I_T(mA)	V_C(V)	I_{PP}(A)	I_R(μA)
12KP36CA	36	40	44.2	5	58.1	206.5	2

Ratings and Characteristic Curves (T_A=25℃)

Figure 1. Peak Pulse Power Rating Curve

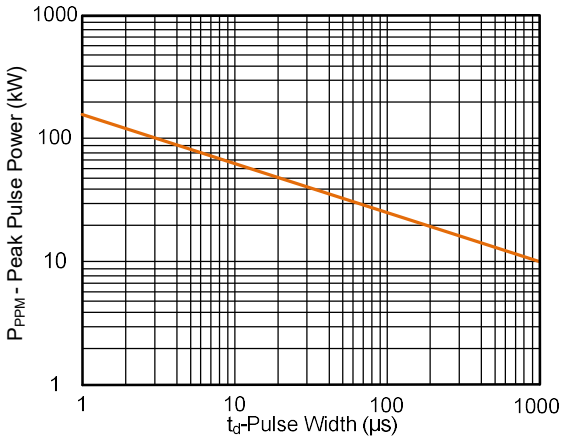


Figure 2. Pulse Derating Curve

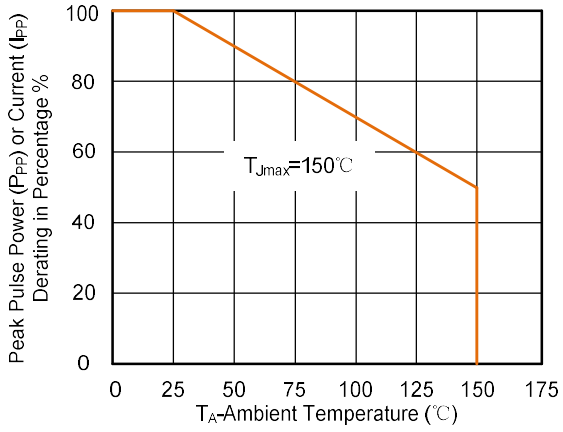


Figure 3. Pulse Waveform

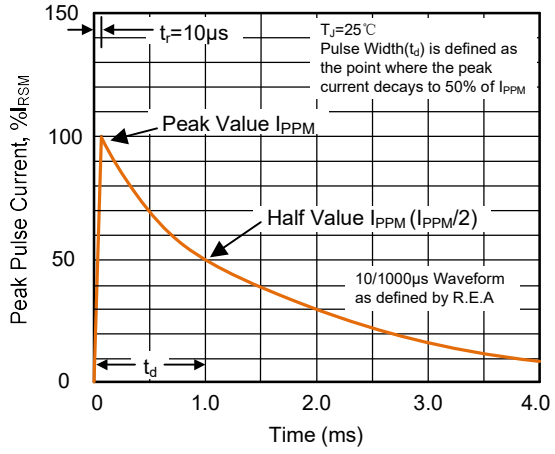
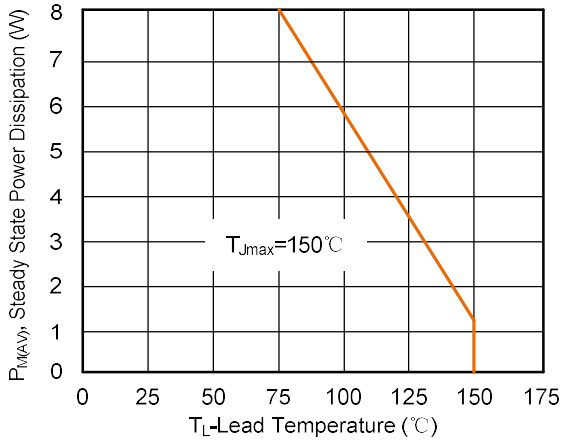
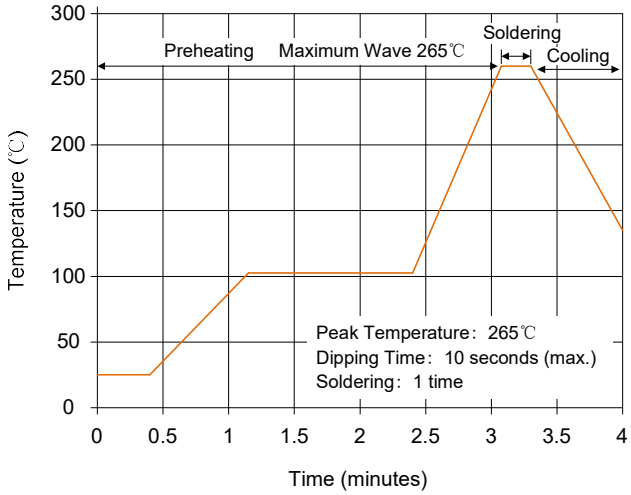


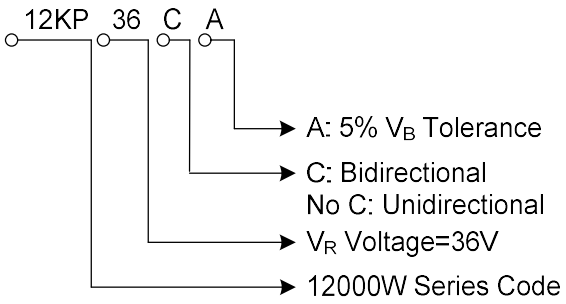
Figure 4. Steady State Power Dissipation Derating Curve

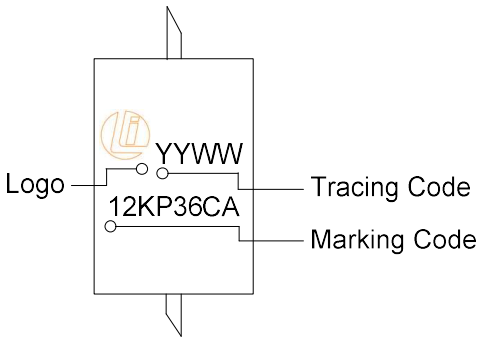


Wave Soldering

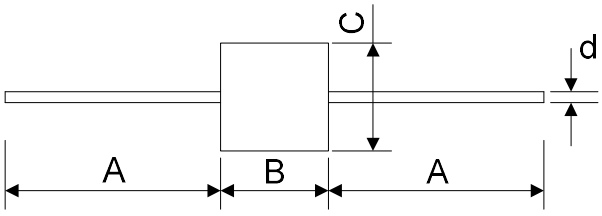


Part Number Code and Marking Code





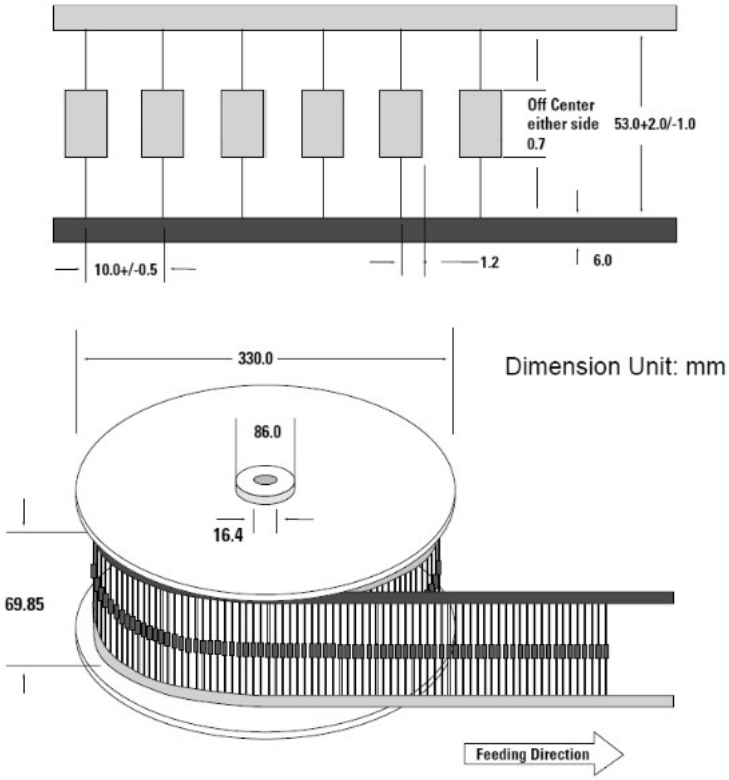
Dimensions (P600)



Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.40	-	1.000	-
B	8.60	9.10	0.340	0.360
C	8.60	9.10	0.340	0.360
d	1.19	1.35	0.047	0.053

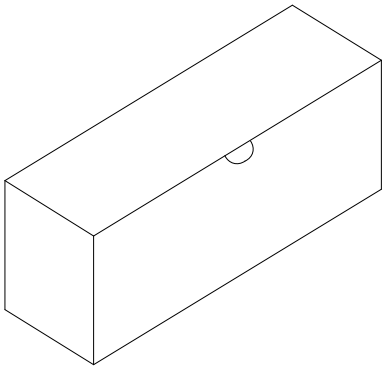
Packaging Specification

Tape



Quantity: 800pcs/reel

Box



Quantity：300pcs/box